

March 11, 1856.

Dr. Gray, F.R.S., in the Chair.

The following papers were read :—

I. NOTE ON *PSALTRIA FLAVICEPS*, A THIRD AMERICAN SPECIES
OF THE PARINE GENUS *PSALTRIA*.
BY PHILIP LUTLEY SCLATER, M.A., F.Z.S.

In describing a new *Conirostrum* in these 'Proceedings' for last year (P.Z.S. 1855, p. 74), and giving a list of all the species of that form with which I was acquainted, I took the opportunity of noticing some birds which had been referred to the same genus, which I had not then met with. Among these latter was the *Conirostrum ornatum* of Lawrence, described and figured in the Annals of the Lyceum of Nat. Hist. of New York for 1851. It is only lately that I have been successful in meeting with a specimen of this, I believe, rather rare species. As I had always supposed, I find it has nothing to do with the genus *Conirostrum*, but has been much more nearly rightly placed by Sundevall, who described it as *Egithalus flaviceps* the year before Mr. Lawrence's name appeared. In my opinion, however, this latter position is not perfectly satisfactory for it. This little bird in fact seems to me to form a very natural member of the Parine genus *Psaltria*, of which some Asiatic species, including the type, are figured in the seventh Number of Mr. Gould's great work on the Birds of that continent.

Mr. Cassin, in a very useful Synopsis of the North-American *Parinæ*, given in his excellent volume on the Birds of California, Oregon, &c., p. 20, mentions two North-American species of this genus, *Psaltria minima* and *P. melanotis*, but says nothing of the present bird, with which he seems to have been unacquainted. Examples of both the former species are contained in the British Museum, and upon comparison agree in every essential character with this bird. It is true that its yellow face and chestnut bend of the wing are quite different in cast of colouring from what we meet with in the other species of this group, and I have little doubt that some naturalists who are fond of coining new names would consider this fact a sufficient excuse for making it the type of a new division. But I do myself think that generic characters ought only to be founded upon differences in structure; and as in the present instance there appears to be none such, I think we shall be quite accurate in registering the present bird as a third American species of the Asiatico-American genus *Psaltria* under the title of

PSALTRIA FLAVICEPS.

Egithalus flaviceps, Sund. Öfvers. af Vet. Ac. Förhand. vii. p. 129 note (1850).

Conirostrum ornatum, Lawrence, Ann. Lyc. New York, 1851, p. 113, pl. 5. fig. 1.

P. fuscescenti-cinereus, subtus dilutior: pileo et gutture flavescens: cumpteris clare castaneis: alis caudaque intus nigricanti-brunneis: rostro et pedibus nigris: tectricibus subalaribus albis.

Long. tota 4·2, alæ 2·1, caudæ 1·9.

Hab. Texas (Lawrence).

Note.—Since writing the above, I have been enabled through Mr. Gould's kindness to compare *Psaltria flaviceps* with the type of the genus, *Psaltria exilis*, from Java. It certainly offers a more pointed beak and wing not so rounded as the latter bird, and may be considered as rather aberrant in form. Any naturalist, therefore, who is unwilling to class it with true *Psaltria* may use for it the generic term *Psaltriparus*, that name having been bestowed by Prince Bonaparte (Compt. Rend. Ac. Sc. Par. xxxi. p. 478) on *Psaltria melanotis* (Sandbach), with which species this bird agrees in every respect.

2. ON A PECULIAR VARIETY OF MUS MUSCULUS. BY JOHN S. GASKOIN, F.L.S.

(Mammalia, Pl. XLI.)

MUS MUSCULUS. Var. *Mus nudo-plicatus*.

I have thus designated this strange and novel form of the genus *Mus*, to give the more importance to the singularity.

In the spring of 1854 a labourer in the employ of Mr. Webster, a tenant on the Taplow-court estate, observed several little white creatures running about a straw-rick in the wood at the back of the lodge near Taplow paper-mills, Maidenhead Bridge, and succeeded in securing two of them;—the following day, on moving some of the straw in search of more, he disturbed two others, which he also captured; and disposed of the four to Bond, the Maidenhead Bridge boatman, for five shillings. Two died during the first night, probably from the rough usage they received when taken; there remained, to use Bond's expression, but "the old buck and a doe big with kit." In seven days she brought forth five young ones; and the next day removed from the nest two that were dead; the remainder were reared. One of the existing five was afterwards lost or killed. These little animals were readily recognized as a form of mouse, but of so extraordinary a conformation in their external structure as to attract the curiosity of the immediate neighbourhood, and obtained the not inappropriate name of the rhinoceros mice. The surmise of the people on the spot is, that they had escaped from one of the numerous barges which are constantly arriving at the paper-mills laden with rags, &c., principally of foreign importation. Bond having possessed them four months, offered them for sale to the Zoological Society of London, and the purchase being declined, I bought them, lest so singular a form in natural history should be lost to science and pass into oblivion; and it is to prevent this, that I now





beg to record their characters in the 'Proceedings' of this Society, They were shown at the meetings of this and the Linnean Societies. and to many other naturalists; and finally, were exhibited during four months in the small-quadraped house in the gardens of the Society, with the view of eliciting information respecting them, as to any similar conformation in the species or genus having before been observed; and expressions of surprise at their novelty of form were in every instance the only remarks obtained. At the period named of their exhibition all had died (three of them are now shown in spirit). Unfortunately they did not breed, although three of them were born, in captivity.

In size these animals somewhat exceeded the common mouse, measuring from the tip of the nose to the base of the tail $4\frac{2}{3}$ ths inches; they were totally destitute of hairs, excepting some two or three dark-coloured labial hairs, or whiskers; the external integument pinkish white, and formed into coarse prominent plicæ, or duplicatures of itself, transversely traversing the body in an undulated shape, and increasing in width and projection as they descended from the dorsum to the most depending line on either side of the thorax and abdomen, and there forming pendulous flaps, extending from the arm of the fore to the thighs of the hind legs; so that all the legs being stretched asunder, as when on the wires of the cage, these flaps became expanded in the manner of the flying squirrel. The plicæ or duplications of the skin were on the sides of the body in a degree symmetrical; and on the face and head, particularly so, as will be observed in the plate, which represents the old male animal, very faithfully delineated by Wolf, to elucidate this paper; the ears of a dark or blackish colour, the tail ash-coloured, and the eyes black, indicating they were not albinos of the species. It was curious to observe the quickness and dexterity with which their little paws opened along the furrows formed by the plicæ or folds, to clean between them. So dissimilar, it will be observed, from the characters given, is the external formation of these animals from that of the domestic mouse, that opinions were risked as to their constituting a different species, but on investigating the teeth of the first one that died, and they proving identical, it was inferred they are a *lusus naturæ* of that species;—if such, however, be the fact, I believe this will prove the first instance on record in which the whole litter or brood of animals or birds, have all been in exactly the same state of abnormal condition, and that condition becoming permanent, and continued through successive generations; of which we have here the example of two or more generations, and have no knowledge whatever of when this abnormal state may have begun;—for, as in this exemplification, "like begets like"—"*similia similibus gignuntur*," it is fair to conclude that the two parents whose progeny resembled them, had also progenitors similar to themselves; especially as they in their breeding, like genuine species in the wild state, associated only with those of their own kind; thus, if the race be not extinct, successions with the same peculiarities will be produced, and give rise to a remarkable example of the

origin of a new species, or variety of a species, in the genus. I have made inquiries about the locality where these animals were found, as to whether others had ever been observed there before they were discovered, or have been met with since, and find these to have been the only known instances of their occurrence.

I am not aware that in the nests of the Rook, *Corvus frugilegus*, or the Black-bird, *Merula vulgaris* (which I mention as being those in whose productions *lusus naturæ* are the most frequently noticed), or in the nests of any other bird, more than one individual of a brood has been found, constituted in the healthy condition, and having the plumage white, and the red eye of the true albino; but variations in colour, &c., may occur in any number, as the results of physical impediments, and not natural production; however, with increase of strength and health, these generally obtain afterwards their proper-coloured plumage, and are not therefore true *lusus naturæ*. To quadrupeds I believe the rule equally applies.

In consequence of the interesting conversation which followed the reading of the foregoing paper, I think it proper to subjoin a few other observations.

The excellent condition and clean appearance of the animals, and their well feeding, and activity, left no doubt as to their healthy state during the six months they were alive in my possession and during the four months they were in that of Bond. A member present stated, that while they were in the gardens he had microscopically examined the lamellæ or branny scales which are ever separating, in larger or smaller particles, from the epidermis of animals, and found them the natural and healthy production. My own examination of these exfoliations had led me to the same opinion. I had the opportunity, and carried my inquiry still further; I carefully examined the surface and sections of the dermoid covering with low and with high microscopic powers, and with transmitted light, and as opake objects, with a view to discover any hair follicles or glandular bulbs from which hairs might have emanated, but could not discover a single indication of either, nor any recognizable vestige of their obliteration;—I therefore believe the organs for pilous production were absent, and *ab initio*. These little animals having been found in a straw-rick, I conclude, will sufficiently indicate their habits and general residence to be similar to those of the common mouse.

Note.—Having recently heard that a specimen of the same variety of *Mus* that I have described is preserved in the Museum of the College of Surgeons, I compared it with the examples I possess, and found it precisely the same in every character; it was caught by the late Mr. Clift in the fire-place of a room in his house in London, and is entered in the Catalogue of Monsters—"No. 121. A common Mouse (*Mus Musculus*), full-grown, which, from its birth, had not the slightest appearance of hair on its skin, being perfectly naked. Presented by Mr. Clift, 1820."

3. DESCRIPTION OF THE ANIMALS AND TEETH OF TYLODINA AND OTHER GENERA OF GASTEROPODOUS MOLLUSCA.

By DR. JOHN EDWARD GRAY, F.R.S., V.P.Z.S., P.B.S. ETC.

In the following paper I forward the description of the animal and the teeth of several genera of Mollusca which have not yet been recorded. It is interesting to find that the examination of the teeth justifies the position which was theoretically assumed for the genera in the different families before their teeth were known.

A. PROBOSCIDIFERA HAMIGLOSSA.

Fam. MURICIDÆ.

FUSUS PALLIDUS (" *F. turbinelloides* = *Pyrula lignaria*, Reeve").

The proboscis elongate, cylindrical, subclavate, entirely retractile; the lingual membrane elongate, narrow, yellow; teeth in three longitudinal series, 1·1·1, the central transparent, provided with a rounded front edge, armed with three rather elongate, conical, subequal denticles; the lateral teeth yellow, versatile, straight, with two compressed arched processes, the terminal one largest, the basal rather smaller, and with a small tooth on its outer edge. The operculum is horny, thick, ovate, subtrigonal, annular, as large as the mouth of the shell; the apex blunt, rather worn; the nucleus apical, scar large oblong, with a thick callous exterior margin.

TYPHIS TETRAPTERUS.

Operculum horny, ovate, blunt, laminar; nucleus anterior apical, as large as the mouth of the shell, rather broader behind.

PISANIA ELEGANS. Panama.

The animal pale brown (in spirits); the foot folded up and across behind, and together longitudinally in front, leaving a J-shaped groove; tentacles very small; proboscis elongate, thick, clavate, entirely retractile; lingual membrane elongate, thin; teeth in three longitudinal rows, 1·1·1, central far apart from each other, and the lateral teeth, lunate, with a slightly denticulated, nearly straight, front edge, and a rather strong concave tooth at each end; lateral teeth versatile, large, with a nearly equal basal and apical, conical, curved process. Male organ slender, elongate, tapering, yellow, compressed. Operculum ovate, acute, thick, horny, annular, nucleus apical.

TRIUMPHIS DISTORTA. Panama.

Lingual membrane elongate; teeth in three longitudinal series, 1·1·1; central teeth very small, far apart; lateral large, versatile, with two basal unequal, and one larger terminal curved process. Operculum ovate, acute, very thick.

CYCLOPE (NASSA) NERITINEA.

Nucleus prominent above the surface of the apex of the semi-adult shell, turrated, spiral, dextral, of three or four transversely sulcated flat whorls, with a blunt tip, at length deciduous, leaving a flat, spiral, rather callous scar. The whorls of the shell of the hatched animal suddenly enlarged, thick; smooth, spotted, forming a sudden contrast to the whorls of the nucleus.

Risso formed a genus, name *Nanina*, from the young state of the shell.

Fam. BUCCINIDÆ.

CUMA SULCATA.

Operculum horny, ovate, triangular, with a deep notch on the middle of the broad side, with a broad callous margin on the inner angular edge of the inner surface. Body and foot with a deep groove on the inner side, formed by the fold on the inner lip of the shell, like the notch in the operculum; foot folded up behind and together in front, forming a J-shaped groove, with a cross groove in front; tentacles close together at the base, diverging, short, compressed, sharp-edged, eyes on the outer side near the tips, which are more slender and acute above them; proboscis moderately elongate, cylindrical, subclavate, completely retractile; lingual membrane very narrow and elongate, horny; teeth dark-coloured when adult, in three longitudinal series, 1 · 1 · 1; the central teeth broad, transverse, about half the width of the lingual membrane, with seven distant conical denticulations on the front edge, the central denticle forming a continued central ridge, the lateral denticulations unequal, the central of the three larger, the outer one on the outer margin of the tooth; the lateral teeth small, conical, curved, acute, versatile with a simple rather elongate base.

B. ODONTOGLOSSA.

Fam. FASCIOLARIADÆ.

FASCIOLARIA SALMO.

Operculum ovate, acute, smooth, slightly concentrically wrinkled; apex of this individual reproduced and rather rounded. Animal bright red; foot, when contracted, folded together transversely behind and longitudinally in front; tentacles small, compressed, subulate, united together at the base, forming a small veil; eyes on the outer side, rather above the base, with a conical tentacle only slightly produced above the eyes; proboscis very long, slender, entirely retractile; lingual membrane very long, slender, with three longitudinal series of teeth in cross lines, 1 · 1 · 1, the central teeth narrow, square, with three small, subequal, acute denticulations, the central one rather the longest; the lateral teeth very broad, slightly arched, and more arched at the outer end, with a series of twenty-five or thirty equal, regular, elongate, subulate teeth, somewhat like the teeth of a coarse hair-comb; the central teeth are opposite the space between the lateral

teeth, that is, alternating with them. Male organ elongate, subcylindrical, compressed, of the same diameter the whole length, rounded at the end with a slight groove on its outer edges, which is not continued up the body as in *Malea*.

LEUCOZONIA ANGULATA.

Animal red; the foot, when contracted, folded up across behind, and longitudinally in front, leaving a J-shaped groove; tentacles close together at their base, diverging, flat, with the eyes on the outer side rather below the tip, which is narrower and acute; proboscis completely retractile, clavate; lingual membrane elongate, rather narrow; teeth in three longitudinal series, the central series rather narrower than the lateral ones, square, with a rather arched anterior edge, with elongate, conical, acute denticulations, the central denticulation being the largest and longest; the lateral teeth bandlike, rather oblique, front edge with several distinct, conical, acute denticulations, the one at the edge of the inner margins near the central tooth being much the largest and longest; operculum ovate, acute, thick; nucleus apical.

C. TÆNIGLOSSA.

Fam. DOLIIDÆ.

The proboscis of this family is very long, large, and more or less dilated, with an open rather trumpet-like mouth at the end.

MALEA RINGENS.

Animal like *Dolium*. Lingual membrane narrow, elongate, wider in front; teeth in seven longitudinal series, dark red, in each cross series, 3·1·3; the central teeth broad, lunate, thin, with a central recurved apex, and sometimes a small denticle for each side, halfway between the tooth and the end; the lateral teeth subulate, curved, acute at the top; cervical collar of two ovate, horny plates, covered with crowded converging subulate teeth; foot short, truncated in front, rounded behind; proboscis cylindrical, large, retractile into a sheath under the tentacular veil; mouth open at the end; tentacles subulate; eyes on short tubercles at the outer hinder side. Male organ very large, compressed, with marginal groove on the outer side, continued up the right side of the body by the side of the rectum, and with a slender filiform appendage near the tip. Operculum none.

Fam. TRITONIIDÆ.

The animals of this family are intermediate in character between the *Probosciferæ* and the *Rostriferæ*. The proboscis is larger and thicker than in the other families of the *Probosciferæ*, is not so much retracted, and is contained in a more free sheath, and the end of the retracted trunk is often partly exposed beyond the margin of the sheath, giving the animal somewhat the external appearance of the *Rostriferæ*, and explaining why some of the French figures of

the animals of *Triton*, *Ranella*, &c. are represented as if they belonged to that division of the Gasteropods.

RANELLA CÆLATA.

Tentacles lateral, separated by a short, rather broad, truncated tubular veil; eyes on the outer side rather above the base; proboscis short, very large and thick, retracted to the edge of the veil, leaving the two rounded pale processes of its apex exposed, forming with the veil a rostrum-like projection, very unlike the elongate, slender, cylindrical retracted proboscis of *Murex*, *Purpura*, &c.; lingual membrane narrow, elongate; teeth in seven series, 3·1·3, close together, rather crowded, the central rather narrow, with a central prominent denticle, having a smaller one on each side of the base; the lateral teeth subulate, curved.

SCUTIBRANCHIATA RHIPIDOGLOSSA.

Fam. TURBINIDÆ.

IMPERATOR, n. s.? Panama.

Eye-pedicle thick; tentacles elongate, slender, frontal lappets truncated, broad at the base, about $\frac{1}{3}$ the width of the forehead; foot folded longitudinally behind and transversely in front; lateral fringe of the right side most distinct; muzzle produced, annulated; lingual membrane elongate, rather narrow, linear, dark brown; central teeth 5·1·5, the middle one broad, the side ones narrower, square, all with a recurved tip; the lateral teeth numerous, hairlike, the inner one wider.

CALLOPOMA SAXOSUM. Panama.

Foot folded across in the middle; back with a hoodlike process covering the front part of the operculum, and depositing the external callosity of it; eyes on short thick pedicels; tentacles linear, at the upper edge of the eye-pedicle; frontal lappet truncated, narrow at the base, at the inner side of the base of the tentacles; lateral fringe on each side, with three beards on the middle of the edge; lingual membrane broad, elongate; central series 5·1·5; the central broad, with a recurved tip, the lateral one more narrow, equal; the lateral teeth numerous, hairlike.

Fam. TROCHIDÆ.

TEGULA PELLIS SERPENTIS. Panama.

Operculum horny, thin, orbicular, of many narrow, gradually enlarging whorls; foot folded together longitudinally when contracted; eyes on thin elongated pedicels; tentacles linear, sheathed at the base by the inner part of the base of the eye-pedicels; frontal lappet none; lateral fringe of left side distinct, with three beards just beneath it; lingual membrane elongate, broad; teeth in ten longitudinal series, in arched cross rows, elongate, with a rounded apex; lateral teeth linear, crowded, arched at the end.

Order PLEUROBRANCHIATA.

Fam. APLYSIADÆ.

APLYSIA DEPILANS ? Genoa.

The small, polished, subglobular spiral (sinistral?) nucleus or apex of the older shell is, with the subapical part of the shell, covered with a membranaceous reflection of the inner lip over its surface, which is only slightly adherent to the surface of the shell and nucleus, and easily removed from it, but which gradually become thicker; the top of the shell appears to be absorbed, or more or less obliterated in the older specimens.

According to Mr. Woodward, Mr. Hancock has observed in the adult specimen two or three shells one within the other, like the *Loligines* or *Sea slaves*.

Fam. TYLODINADÆ.

TYLODINA PUNCTULATA = *T. Rafinesquii*, Philippi.

Lingual membrane very broad, brown; teeth small, uniform, very numerous, in very numerous longitudinal lines, forming straight continued uniform lines across the membrane, with an indistinct central line; the tentacles subulate, slit on the outer side; the lips are produced and acute on each side, and twisted, leaving a slight cavity on the outer side of the tip; the mantle is thin, free all round the edge and slightly thickened just within the margin, rather thicker and more free over the front of the back; the gill is single on the hinder part of the right side just under the mantle, attached the whole of its length on the inner side by a central ridge to the side of the body; the outer side is furnished with a rather thick, rather zigzag central vessel, giving out pinnated vascular branches, nearly alternating with each other on each side of the great vessel; the foot is larger than the mantle and shell, expanded, rounded behind, truncated in front and slightly emarginate in the centre under the mouth; the sexual aperture not visible in the specimen in spirits. Shell conic, patelloid, thin, slightly pearly within, with a thin, hard, horny periostraca, which is produced beyond the edge of the shell, and radiately coloured, in the dry state brittle, hard, and contracted; the apex (of the shell) subcentral, with a rather produced polished top, nucleus subglobose, with a slightly convex spire of one and a half or two rapidly enlarging subconvolute whorls; aperture ovate, rather irregular, slightly dilated on the right side; cavity simple; muscular scar subannular, with an angular inflection rather behind the middle of the right side, the form of the scar is variable, sometimes square, broad all round; in the larger more developed specimens the scar is rather horse-shoe shaped, being rather dilated at the front part of each side, and the front portion over the back of the head is narrow, linear, and transverse.

The genus was first established by Rafinesque in 1814; Blainville, who only knew it from Rafinesque's imperfect descriptions, referred it to the *Patelloida*, but Menke, Philippi and Cantraine properly considered it allied to *Pleurobranchus*, and especially *Umbrella*, and very

lately Dr. Lovén stated that it was allied to *Turbonella* (Index Moll. Scand. 19). The examination of the teeth shows it to belong to the typical *Pleurobranchiata*, and the form and position of the gill its affinity with the genera *Pleurobranchus* and *Umbrella*; indeed it chiefly differs from the former genus in having an external conic patelloid shell, and from the latter in the head being produced and the mouth not sunken in a deep anterior pit.

In the British Museum there are two species of this genus.

1. *T. punctulata*, Rafin., *T. Rafinesquii*, Philippi, *T. citrina*, Joannis, Guérin, Mag. Zool. i. t. 36.

Shell thin, whitish; periostraca hard, opaque, with dark brown rays. Mediterranean.

2. *T. atlantica* = *Umbrella Mediterranea*? MacAndrew, Ann. Nat. Hist.

Shell solid, bright yellow; periostraca —? N. Atlantic, Madeira.

Fam. UMBRELLADÆ.

UMBRELLA MEDITERRANEA.

The nucleus of this genus is very like that of *Tylodina*, subglobose, polished, sinistral, of one and a half or almost two subcylindrical, rapidly enlarging whorls; the adult shell is irregular in the outline and rather expanded on the hinder part of the right side, over the gills; the muscular scar is annular, continued, and of nearly uniform breadth, but slightly interrupted in various parts. The chief difference between the shell of *Tylodina* and *Umbrella* is, that the shell of the former is more elevated, very thin, covered with a hard, rather paleaceous periostraca, and the muscular scar is furnished with an angular inflation on the hinder parts of the right side; a sinistral nucleus is found on several others; shells as the genera of *Pyramidellidæ*.

Fam. PROSERPINIDÆ.

PROSERPINA.

Respiratory cavity open; mantle free from the back of the neck, with a double edge, the outer one rather reflexed; foot moderate, truncated in front, acute, and keeled above behind; muzzle short, truncated, annulated, with a triangular inferior mouth; tentacles 2, lateral, far apart, tapering and acute; eyes moderate, sessile, at the outer side of the base of the tentacles; the front part of the back of the foot concave, surrounded by a continuation of the mantle, forming a fleshy submarginal fringe, which is fuller (when contracted in spirits), crumpled and folded on itself on the left side. Operculum none.

4. DESCRIPTIONS OF THIRTY-FOUR NEW SPECIES OF BIVALVE MOLLUSCA (LEDA, NUCULA, AND PYTHINA) FROM THE CUMINGIAN COLLECTION. BY ARTHUR ADAMS, F.L.S. ETC.

B. m. 1. PYTHINA ARCUATA, A. Adams.

P. testa transversa, elongata, inæquilaterali, triangulari, latere antico brevior, subtruncato, ad umbonibus angulato, postico longiore, rotundato; margine ventrali arcuato, in medio sinuato, irregulariter hiante; alba concentricè striata, epidermide fusca radiatim striata induta.

Hab. Isle of Zebu, adhering to *Lingula anatina* at the upper edge, sandy mud, 3 fathoms. Mus. Cuming.

This is an arcuated triangular species with the anterior side of the valves angulated, and the surface covered with a fuscous epidermis striated towards the ventral margin.

B. m. 2. PYTHINA CUMINGII, A. Adams.

P. testa tenui, elongato-transversa, subtrigonalis, æquilaterali, umbonibus acutis medianis, epidermide tenui virido-fusca induta, concentricè striata, radiatim sulcata, sulcis ad marginem ventralem distinctioribus, umbonibus lævigatis, corrosulis, margine ventrali in medio sinuato, intus inciso-crenulato.

Hab. Gindulman, Isle of Bohol, sandy mud, 8 fathoms; Himamailan, Isle of Negros, sandy mud, 3 fathoms. Mus. Cuming.

This is the largest species of *Pythina* yet known, the transverse diameter being about one inch. The shell is thin, nearly smooth, and covered with a brownish-green epidermis, and with the surface near the beak eroded.

B. m. 3. PYTHINA PAULA, A. Adams.

P. testa parva, transverso-elongata, trigonalis, æquilaterali, ad umbones subangulata, latere postico angustiore, antico rotundato; concentricè striata, albida, epidermide tenui fulvicante induta; margine ventrali sinuato, in medio excavato.

Hab. Raimes Island, Torres Straits (*Capt. Ince*). Mus. Cuming.

This is a small whitish species angulated near the beak and covered with a thin, pale yellowish epidermis.

B. m. 4. PYTHINA PECULIARIS, A. Adams.

P. testa parva, transverso-elongata, æquilaterali, triangulari, flexuosa, alba, concentricè striata, umbonibus minutis, medianis acutis, latere postico plica angulata obliqua instructo, margine ventrali medio valde sinuato.

Hab. Ceylon (*E. L. Layard, Esq.*). Mus. Cuming.

This species is of a very remarkable form, being slightly twisted laterally, and so deeply sinuated in the ventral margin as to appear bent on itself.

B. m. 5. PYTHINA TRIANGULARIS, A. Adams.

P. testa parva, æquilaterali, trigonalis, alba, in medio linea impressa

divisa, concentricè striata; umbonibus perparvis medianis; margine ventrali hiante, rectiusculo, medio subsinuato.

Hab. Bay of Manilla, sandy mud, 5 fathoms. Mus. Cuming.

This is a small white triangular shell with an impressed line in the centre of the valves, and with the ventral margin gaping and nearly rectilinear, although it is slightly notched in the middle.

6. LEDA ELECTA, A. Adams.

L. testa elongato-transversa, compressa, vix æquilaterali, lactea, solidiuscula, utrinque hiante; latere antico acuminato, rotundato, postico attenuato, rostrato, oblique subtruncato; concentricè tenuissime plicato-lirata; plicis postice evanidis, distantioribus, margine ventrali arcuato.

Hab. Santos, Brazil (*Capt. Martin*). Mus. Cuming.

This is a very beautiful milk-white *Leda*, partaking, in many particulars, of the character of *F. crenifera* and *L. costellata*, Sowerby.

7. LEDA SILIQUA, Reeve.

L. testa ventricosa, solidiuscula, subæquilaterali, epidermide nitida fusca induta, concentricè tenuissime sulcata; umbonibus prominentibus, latere antico rotundato, postico subrostrato, oblique truncato; area postica angulata, et carina obtusa ab umbonibus ad marginem ventralem extendente.

Hab. Arctic Seas (*Sir E. Belcher*). Mus. Cuming.

This is a fine pod-like Arctic species, covered with a dark fuscous epidermis, with the hinder side angulated and obliquely truncate, and with an obtuse ridge extending from the beaks to the ventral margin.

8. LEDA CONCINNA, A. Adams.

L. testa tenuiuscula, compressa, lateribus hiante, pallide fusca, concentricè lirata, liris angustis, regularibus, subdistantibus; latere antico brevior ac rotundo, postico longior ac rostrato; rostro producto, tenui, subrecurvato, truncato; area lanceolata, angusta, carina crenata utriusque instructa.

Hab. New Zealand. Mus. Cuming.

A rather thin compressed species slightly gaping at both ends, of a light brown colour, concentrically lirated, and with a slender beak truncate at the end.

9. LEDA INORNATA, A. Adams.

L. testa transversa, triangulari, ovata, gibbosa, fusca; umbonibus albidis, erosis; concentricè valide sulcata, latere antico brevior et rotundato, postico acuminato, subrostrato; area lanceolata, lata ad lateribus angulata, margine ventrali regulariter arcuato.

Hab. New Guinea. Mus. Cuming.

This species is founded on a small, rather gibbose shell, covered with a fuscous epidermis, from New Guinea, coarsely sulcate and slightly beaked posteriorly.

10. LEDA FASTIDIOSA, A. Adams.

B.M. *L. testa transversim ovata sordido albido-fusca concentricè lirata fusca, nitida, concentricè tenuiter et regulariter sulcata; latere antico subproducto ac rotundato, postico angulato ac rostrato, rostro acuminato, margine ventrali postice subsinuoso et in medio subproducto.*

Hab. New Zealand. Mus. Cuming.

A shining, pale fuscous, ventricose species, very gibbose in the middle, and beautifully grooved transversely; the beak slender, pointed and recurved.

11. LEDA BELLULA, A. Adams.

B.M. *L. testa transversim ovata, sordide albido-fusca, concentricè lirata, liris elevatiusculis subdistantibus, umbonibus prominentibus; latere antico rotundato, postico rostrato; rostro acuto, attenuato, recurvo; area lanceolata, valde impressa, liris confertis marginata.*

Hab. Australia (Mr. Strange). Mus. Cuming.

This is a dull dirty white or light brown shell, concentrically lirated, and with a somewhat curved and pointed rostrum; the lanceolate area is deeply impressed, and has a prominent ridge on each side.

12. LEDA INCONSPICUA, A. Adams.

L. testa transversim ovata, ventricosula, nitida, fusca, concentricè subtilissime sulcata; latere antico breviorè et rotundato, postico longiorè, subacuminato ac oblique subtruncato; area lanceolata, obscura, nymphis prominentibus, margine ventrali regulariter arcuato.

Hab. Australia. Mus. Cuming.

A shining light-brown species, rather ventricose concentrically, very finely sulcate, with the posterior side produced attenuated, and with the end obliquely truncate.

13. LEDA LUGUBRIS, A. Adams.

L. testa solida, subgibbosa, triangulari-ovata, nigro-fusca; latere antico declivo, lunula lanceolato-cordata, impressa; latere postico acuminato ac breviter rostrato; area lanceolata, lata, lævi; concentricè lirata, liris validis distantibus postice flexuosis; margine ventrali simplici.

Hab. —? Mus. Cuming.

A dark, fuscous, solid shell, having very much the aspect of a *Crassatella*, with a broad impressed lunule and strong flexuous plicæ.

14. LEDA LEPIDA, A. Adams.

L. testa transversim ovata, ventricosa, nitida, pallide fulva, concentricè tenuiter sulcata; latere antico breviorè et rotundato,

postico longiore, superne subangulato, inferne oblique rotundato; area lanceolata, utrinque carinata.

Hab. Philippines. Mus. Cuming.

This is a shining, pale fulvous, finely sulcate species, with the hinder side rather acutely angulated above and obliquely rounded below, and with the lanceolate area ridged on each side.

15. LEDA DECORA, A. Adams.

L. testa transverso-oblonga, crassa, solida, utrinque subhiante, sordide alba, conferte et valde concentrice sulcata; latere antico rotundato, postico rostrato; rostro recurvato et oblique subtruncato; area lanceolata, depressa, carina valida crenata utriusque instructa.

Hab. West Indies. Mus. Cuming.

A transversely elongate species, with a strong crenate keel on each side of the lozenge, and somewhat resembling in appearance the *L. crenifera* of Sowerby.

16. LEDA FULGIDA, A. Adams.

L. testa transversim ovata, laevi, pallide fusca, micante, perventricosa; antice brevior et rotundata, postice acuminata et rostrata; rostro subrecurvo, margine ventrali regulariter arcuato.

Hab. Port Essington. Mus. Cuming.

This is a smooth, shining, pale-brown shell, very ventricose, rounded and short anteriorly and rostrate posteriorly, and with the rostrum rather recurved.

17. LEDA SEMISULCATA, A. Adams.

L. testa transversim oblonga, compressiuscula, lactea, nitida, concentrice sulcata, sulcis ad partem posticam obsoletis; umbonibus acutis, subcentralibus; latere antico brevior, rotundato, postico acuminato, non producto; nymphis prominentibus, oblique sulcatis; margine ventrali regulariter arcuato.

Hab. Borneo. Mus. Cuming.

A shining, rather compressed, milk-white shell, with the sulci obsolete on the posterior half, and with the hind side acuminate but not produced.

18. LEDA PLICIFERA, A. Adams.

L. testa transverso-oblonga, alba, nitida, subventricosa, oblique sulcata; latere antico rotundato, plicis 3-4 validis radiantibus instructo, latere postico carina obliqua ab umbonibus ad marginem ventralem extendente; area lanceolata, carina crenata duplici utrinque instructa; margine postico truncato et valde emarginato, margine valvarum simplici.

Hab. China Seas. Mus. Cuming.

Strongly notched at the hind margin, and with three or four plicæ at the anterior part, and with a double crenate keel on each side of the lunule.

19. YOLDIA LEPIDULA, A. Adams.

Y. testa transversa, oblonga, utrinque hiante, tenui, inæquilaterali;

latere antico brevior rotundato, postico longiore, subangulato; pallide fusca, nitida, tenuiter concentricè sulcata, margine ventrali regulariter arcuato.

Hab. Coast of Borneo. Mus. Cuming.

A thin pale-brown species, with the hind side rather angulated, but not distinctly rostrate.

20. *NUCULA BELLOTII*, A. Adams.

N. testa oblique ovata, ventricosa, valde inæquilaterali; latere antico brevior; lunula cordata, conspicua; umbonibus erosis; epidermide crassa, nitida, olivacea induta, concentricè plicata, plicis validioribus ad marginem ventralem; area postica et antica pallidis.

Hab. Arctic Seas (Sir E. Belcher). Mus. Cuming.

The beaks are much eroded, and the valves are strongly plicate towards the ventral margin. I have dedicated this fine Arctic species to the memory of the gallant Bellot, who unfortunately lost his life in the search after Sir John Franklin and his brave companions.

B.M 21. *NUCULA NITIDULA*, A. Adams.

N. testa perobliqua, gibbosa; latere antico oblique subtruncato, postico rotundato, producto; nitida, obscure sulcata, sub lente radiatim striata; umbonibus subarctis; pallide fusca, margine valvarum tenuiter crenulata.

Hab. New Zealand.

A very oblique gibbose species, radiately striated under the lens, and produced and rounded posteriorly; it is obscurely concentrically sulcate.

22. *NUCULA LAYARDII*, A. Adams.

N. testa transversim ovata, compressiuscula, nitida vix lævi, obsolete concentricè sulcata; umbonibus margaritaceis; latere antico brevior excavato, ad partem ventralem subproducto; pallide viridi-fusca, margine valvarum simplici.

Hab. Ceylon (E. L. Layard, Esq.). Mus. Cuming.

A pale greenish-brown *Nucula*, with the anterior side short and excavated, and the surface obscurely sulcate.

23. *NUCULA MARGARITACEA*, A. Adams.

N. testa transversim ovata, sublævi, nacreæ splendida tenuiter concentricè obsoletim striata; lunula et area lanceolata in medio prominentibus; latere antico subangulato et producto, margine valvarum simplici.

Hab. Malacca (Dr. Traill). Mus. Cuming.

This is a rather smooth ovate species, glistening with a nacreous lustre, especially towards the beaks.

24. *NUCULA PAYTENSIS*, A. Adams.

N. testa perobliqua, transversim ovata, gibbosa; latere antico brevissimo; epidermide fusca induta; lunula et area lanceolata,

valde transversim sulcatis, concentricè sulcata, decussatim striata, umbonibus erosiusculis, margine ventrali tenuiter crenulata.

Hab. Payta, Peru. Mus. Cuming.

A very oblique, ovate, gibbose species, concentrically grooved and decussately striated.

25. *NUCULA GIBBA*, A. Adams.

N. testa perobliqua, solida, gibbosa, pallide fusca; latere antico abrupte truncato; lunula lata, cordata; area lanceolata, utrinque serie tuberculorum transversorum instructa; lævi, nitida, obsolete radiatim striata, margine valvarum valde crenulato.

Hab. Australia (*Mr. Strange*). Mus. Cuming.

This is a very oblique, solid, gibbose species, with a wide cordate lunule, and with a row of transverse tubercles on each side of the lanceolate area.

26. *NUCULA CRENULATA*, A. Adams.

N. testa perobliqua, transversim ovata, fusca; latere postico producto, rotundato; area lanceolata, transversim valde sulcata; concentricè valde sulcata, interstitiis striis radiantibus crenulatis, pallide fusca; margine crenulato.

Hab. Guadaloupe. Mus. Cuming.

27. *NUCULA SIMPLEX*, A. Adams.

N. testa oblique ovata, tenui, compressa, pallide olivacea, vix lævi, concentricè obsolete striata; lunula lanceolata; nymphis prominulis; latere postico producto, rotundato, margine valvarum simplici.

Hab. Sydney (*Mr. Strange*). Mus. Cuming.

Like *N. Strangei*, but with the anterior side shorter and more truncate.

28. *NUCULA STRANGEI*, A. Adams.

N. testa oblique ovata, inæquilaterali, subcompressa; epidermide nitida, aureo-viridi induta; latere antico breviorè, ad lunulam excavato, postico longiorè rotundato; area lanceolata, elevata, superficie obscure concentricè sulcata.

Hab. New Zealand (*Mr. Strange*). Mus. Cuming.

29. *NUCULA PAULULA*, A. Adams.

N. testa perobliqua, gibbosula, latere antico declivi, umbonibus erosulis; fusca, concentricè irregulariter sulcata; latere postico rotundo et producto, margine ventrali crenulato.

Hab. Japan. Mus. Cuming.

A small brown, very inequivalve, solid, gibbose species.

30. *NUCULA STRIOLATA*, A. Adams.

N. testa compressiuscula, oblique ovata, umbonibus subacutis, pallide olivacea, obsolete concentricè sulcata, valde radiatim striata; margine ventrali crenulato.

Hab. China Seas. Mus. Cuming.